# Critical Assessment of Genome Interpretation (CAGI) Manager

**Research Group of Steven Brenner**
**University of California, Berkeley**

*Establish the state-of-the-art in genome interpretation*

We are seeking a leader for the Critical Assessment of Genome Interpretation (CAGI, \'kā-jē\), a community experiment to evaluate the prediction of phenotypes from genetic variation. CAGI objectively assesses computational methods for predicting the phenotypic impacts of genomic variation. In this experiment, modeled on the Critical Assessment of Structure Prediction (CASP), participants are provided genotypic data and make predictions of resulting molecular, cellular, or organismal phenotype. These predictions are evaluated against experimental and clinical characterizations, and independent assessors perform the evaluations. Community workshops are held to disseminate results, assess our collective ability to make accurate and meaningful phenotypic predictions, and better understand progress in the field. From this experiment, we identify bottlenecks in genome interpretation, inform critical areas of future research, and connect researchers from diverse disciplines whose expertise is essential to methods for genome interpretation. The third CAGI experiment assessed 188 predictions for this year's ten diverse challenges. These predictions were made by 82 predictors who hailed from labs located in 15 different countries.

The CAGI Manager will be primarily responsible for operating the CAGI experiment, from developing challenges to managing prediction submissions and assessments to dissemination of results. Each new challenge requires extensive interactions with the data set provider to develop the most informative challenge. Supervision of assessment includes interacting with assessors, developing standard and automated assessment protocols, and ensuring that uniform standards are applied and that proposed assessment methods are appropriate, as well as reviewing assessment results and ensuring that the necessary technical support is provided. Prediction management includes engaging a broad and diverse community, providing tutorials, editing necessary web resources, distributing challenges, robustly accepting predictions, providing comprehensive access to results and analysis, and ensuring data security. The CAGI Manager will organize the CAGI conference culminating each experiment, at which results are initially presented. He or she will work with participants to produce publications about CAGI experiments and make presentations to ensure broad dissemination.

Interested applicants should have statement of interest, CV, transcript, and at least three letters of reference sent to
jobs@compbio.berkeley.edu

For more information, see http://compbio.berkeley.edu
http://genomecommons.org http://genomeinterpretation.org

Salary: dependent upon experience and qualifications.
The University of California is an Equal Opportunity/Affirmative Action Employer.

**The Berkeley academic environment**
The Brenner lab is an interdisciplinary research group at the University of California, Berkeley, one of the world's premiere research universities. We are associated with the Department of Plant and Microbial Biology, the Department of Molecular and Cell Biology, the Department of Bioengineering, as well as the University of California, San Francisco, and Lawrence Berkeley National Lab.

CAGI is jointly run with the Moult lab at the University of Maryland. Collaborators in this project include members of the Berkeley Center for Computational Biology, biologists and engineers at Tata Consulting Services, and clinicians at UCSF. The CAGI experiment engages a vibrant community. In addition to predictors, it includes dataset providers, advisory board and council, and assessors: **Data providers:** Adam P. Arkin, Madeleine Price Ball, Jason Bobe, George Church, Andre Franke, Nina Gonzaludo, Emma D'Andrea, Lisa Elefanti, Joe W. Gray, Linnea Jannson, John P. Kane, Pui-Yan Kwok, Rick Lathrop, Angel C. Y. Mak, Mary J. Malloy, Chiara Menin, John Moult, Robert Nussbaum, Lipika R. Pal, Clive R. Pullinger, Jasper Rine, Maria Chiara Scaini, Jeremy Sanford, Nicole Schmitt, Jay Shendure, Michael Snyder, Tim Sterne-Weiler, Paul L. F. Tang, Sean Tavtigian, Silvio Tosatto; **Assessors**: Rui Chen, Roland Dunbrack, Iddo Friedberg, Gad Getz, Rachel Karchin, Alexander Morgan, Sean Mooney, John Moult, Robert Nussbaum, Jeremy Sanford, David B. Searls, Artem Sokolov, Josh Stuart, Shamil Sunyaev, Sean Tavtigian, Silvio Tosatto; **Advisory Board**: Russ Altman, George Church, Tim Hubbard, Scott Kahn, Sean Mooney, Pauline Ng, Susanna Repo; **Scientific Council**: Patricia Babbitt, Atul Butte, Garry Cutting, Laura Elnitski, Reece Hart, Ryan Hernandez, Rachel Karchin, Robert Nussbaum, Michael Snyder, Shamil Sunyaev, Joris Veltman, Liping Wei.

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